UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
10/645,685	08/21/2003	Michael L. Oliver	DP-310121	8290
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M/C 480-410-2 PO BOX 5052	- -		ART UNIT	PAPER NUMBER
TROY, MI 48007			3616	
			DATE MAILED: 07/29/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of term may be serially under the provision of 3° CFR 1.13(d). In no event, however, may a reply be timely filed Extensions of term may be serially under the provision of 3° CFR 1.13(d). In no event, however, may a reply be timely filed Extensions of term plus specified doors in less than thinty (30) days, a reply within the statutory minimum of thinty (30) days will be considered femaly. **Filoretor forey by specified doors in the analysis of the provision of the provi			î/					
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	Attachment(s)	🗂						
) ☑ Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date								
) 🔯 Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 5) 🔲 Notice of Informal Patent Application (PTO-152)	3) 🔯 Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5) 🔲 Notice of Informal F						
Paper No(s)/Mail Date <u>2/16/04; 6/21/04</u> . 6)Other:	Paper No(s)/Mail Date 2/16/04; 6/21/04.	6) [_] Other:						

Application/Control Number: 10/645,685 Page 2

Art Unit: 3616

DETAILED ACTION

Claim Objections

1. Claim 18 is objected to because of the following informalities: "MR" should be -- magnetorheological--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

- 2. Claims 1-28 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- 3. Regarding claims 1-28, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).
- 4. Claims 10-13 and 19 recites the limitation "said strut". There is insufficient antecedent basis for this limitation in the claim. For purpose of examining the claims on merit, the examiner assumes that applicant intended to claim "said strut module".
- 5. Claim 8 recites the limitation "said relative rigid portion" in line 1, "said flexible portion" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

6. Claims 1-9 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of

Art Unit: 3616

copending Application No. 10/645,684. Although the conflicting claims are not identical, they are not patentably distinct from each other because the following reasons:

Claims 1-9 of U.S Application No. 10/645,684 read on the claimed limitations as recited in claims 1-9 of the instant application.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

- 7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 8. Claims 1-7, 9, 13-14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al (U.S. 6,598,932) in view of Catanzarite et al (U.S. 6,070,681).

Gross et al discloses a controlled suspension system for use between a truck cab and an associated vehicle frame (5) comprising: a strut module (3v, 3h) adapted to be attached at one end to a truck cab (1) and at an opposite end to an associated vehicle frame (5), said strut module including an air sleeve (21) capable of being selectively pressurized; whereby the distance between the cab (1) and the associated frame (5) is maintained within desired limits by selective pressurization of the air sleeve (21).

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Art Unit: 3616

As to claims 2-7, Gross et al discloses a controlled suspension system wherein the strut module includes a strut having an inner tube (27), an outer tube (23) concentric with the inner tube (27) and a bearing sleeve (roller bearing 23a) positioned between the inner tube (27) and said outer tube (23), whereby the bearing sleeve (23a) distributes a bending moment applied to ends of said strut; wherein the air sleeve (21) is connected to the inner tube (27) and the outer tube (23); wherein the air sleeve (21) is concentric with the inner tube (27); wherein the air sleeve (21) includes a flexible portion connected to the outer tube; wherein the air sleeve includes a relatively rigid portion (19)connection to the inner tube (27); wherein the relatively rigid portion is concentric with the inner tube (27).

As to claim 9, Gross et al discloses a controlled suspension system, wherein the strut module includes a two point/three-point connection (the mounting flange of the combine air spring and shock absorber as shown in figure 4) adapted to interconnect the cab and the frame, whereby the two point/three-point connection resists relative lateral movement between the cab and the frame.

Gross et al fails to disclose the invention, wherein the strut module including a height sensor for measuring a distance between the truck cab and the associated frame and generating a signal indicating thereof; and a controller for receiving the signal from the height sensor and selectively pressurizing the air sleeve; and the controller is mounted on the strut.

Catanzarite teaches the cab suspension including a height sensor (30, 30a, or 30a') for measuring a distance between the truck cab (22) and the associated frame

(24) and generating a signal indicating thereof; and a controller (36) for receiving the signal from the height sensor (30, 30a, or 30a') and selectively pressurizing the air sleeve (1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cab suspension of Gross et al by attaching the height sensor and the controller as taught by Catanzarite on the mounting flange of the strut module in order to control dynamic vibration (ride comfort), or simply providing a controllable level of damping between the cab and the frame.

With respect to claim 18:

Gross et al teach every element as discussed above except that the strut module include and magnetorheological (MR) strut and the controller is connected to the MR strut to vary the damping characteristics.

Cantanzarite teaches the cab suspension system comprising: the strut module include and magnetorheological (MR) strut (28) and the controller (36a) is connected to the MR strut to vary the damping characteristics.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cab suspension system of Gross et al by using teaching of Cantanzarite in order to control dynamic vibration (ride comfort) and level of damping between the cab and frame.

9. Claims 19, 21-23, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al (U.S. 6,598,932) in view of Catanzarite.

Art Unit: 3616

Gross et al discloses a controlled suspension system for use between a truck cab and an associated vehicle frame (5) comprising: a strut module (3v, 3h) adapted to be attached at one end to a truck cab (1) and at an opposite end to an associated vehicle frame (5), wherein the strut module includes a two point/three-point connection (the mounting flange of the combine air spring and shock absorber as shown in figure 4) adapted to interconnect the cab and the frame, whereby the two point/three-point connection resists relative lateral movement between the cab and the frame; whereby the distance between the cab (1) and the associated frame (5) is maintained within desired limits by selective pressurization of the strut module.

Gross et al fails to disclose the invention, wherein the strut module including a height sensor for measuring a distance between the truck cab and the associated frame and generating a signal indicating thereof; and a controller for receiving the signal from the height sensor and selectively pressurizing the air sleeve; and the controller is mounted on the strut.

Catanzarite teaches the invention wherein, the cab suspension including a height sensor (30, 30a, or 30a') for measuring a distance between the truck cab and the associated frame (24) and generating a signal indicating thereof; and a controller (36) for receiving the signal from the height sensor (30, 30a, or 30a') and selectively pressurizing the air sleeve (26); wherein the height sensor (30) is integral with the controller (36).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cab suspension of Gross et al by attaching the height

Art Unit: 3616

sensor and the controller as taught by Catanzarite on the mounting flange of the strut module in order to control dynamic vibration (ride comfort), or simply providing a controllable level of damping between the cab and the frame.

With respect to claim 27:

Gross et al teach every element as discussed above except that the strut module include and magnetorheological (MR) strut and the controller is connected to the MR strut to vary the damping characteristics.

Cantanzarite teaches the cab suspension system comprising: the strut module include and magnetorheological (MR) strut (28) and the controller (36a) is connected to the MR strut to vary the damping characteristics.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cab suspension system of Gross et al by using teaching of Cantanzarite in order to control dynamic vibration (ride comfort) and level of damping between the cab and frame.

10. Claims 10-12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al (U.S. 6,598,932) and Catanzarite and further in view of Peddycord et al (U.S. 6,758,294).

The combination of Gross et al and Catanzarite teach every element of the invention as discussed above except that Gross fails to disclose a transverse frame element and the strut is adapted to be attached thereto; wherein the strut is adapted to be positioned at substantially a midpoint of said transverse frame element; wherein the strut is adapted to be mounted on a downwardly-depending flange of said cab.

Peddycord et al teaches the invention wherein the suspension system for a truck cab comprising: a transverse frame element (20) and the strut (24) is adapted to be attached thereto; wherein the strut is adapted to be positioned at substantially a midpoint of the transverse frame element (20); wherein the strut is adapted to be mounted on a downwardly-depending flange (46) of said cab.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cab suspension of Gross et al by using the teaching of Peddycord in order to modulate relative motion of the cab with respect to the frame for minimize transmission of a shock or vibration to the cab.

Allowable Subject Matter

11. Claims 8, 15-17 and 24-26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan C To whose telephone number is (571) 272-6677. The examiner can normally be reached on Mon-Fri (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTo

June 22, 2005

PAUL N. DICKSON

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Page 9